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ABSTRACT

The process of establishing a correspondence teaching institution is described in the document, and is largely based upon experience gained from the National Correspondence Institution, Dar es Salaam, Tanzania. Beginning with the initial conception and discussion for establishing such an institution, the document examines all planning and organizational stages, including location, staff establishment, equipment, communication, facilities, enrollment, teaching administrative procedures, research and evaluation, and planning for future development. Nine figures supplement the text. It is stated that the techniques discussed should have universal application in any scheme for establishing a correspondence teaching system largely for adult, rural populations who have already achieved a certain level of education but have limited access to other educational resources. (Author/LH)

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Experiments and innovations in education No. 17

Establishing an institution teaching by correspondence

by Renée F. Erdos

A study prepared for the International Educational Reporting Service

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Preface

The United Republic of Tanzania is a rich source of educational innovations. Number 15 in this series was a thorough account of the organization of radio study group campaigns in that country, and this book, in equivalent detail, draws on experience gained from the National Correspondence Institution, Dar es Salaam. The whole process of establishing a correspondence teaching institution is described, from the initial conception and discussion, through all planning and organizational stages, to the day-to-day tasks of the staff and forward planning. Although largely based on the background of the United Republic of Tanzania, the techniques discussed in this book should have universal application in any scheme for establishing a correspondence teaching system intended largely for adult, rural populations who have already achieved a certain level of education but have limited access to other educational resources.

The author, Ms. Renée F. Erdos, has had a long and varied experience in correspondence education both in the Third World and in developed countries. She expresses her appreciation of technical advice on printing and photography by Lennart H. Grenholm, author of the Tanzanian radio study group volume in this series. In expressing its gratitude to Ms. Renée F. Erdos for the enthusiasm and readability of her study, the Secretariat reminds readers that the views expressed do not necessarily reflect those of Unesco.

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Introduction

Many of today's long established institutions teaching by correspondence began with one experimental course of instruction to meet one particular educational or training, need. From the experience of these early experiments the pioneers of correspondence education developed techniques of teaching and management, and large institutions with varied educational programmes grew and expanded over a period of time.

The Oxford English Dictionary defines "to correspond" as "to communicate with", and "communication with" is the fundamental operation in correspondence teaching. It is a two-way communication, that flows continuously between correspondence students and their tutors, which integrates and sustains the presentation of the study material. In the early days of correspondence teaching, the only channel for this communication was the printed and written word with illustration by the printed picture and diagram. Now, however, progress in technology has opened several additional channels through which the communication of correspondence education can be transmitted, for example, radio, television, the tape recorder, films and slides. Courses of instruction for correspondence students in which one channel of communication supports another are being developed, for example printed study material is being supported by radio broadcasts, or radio broadcasts are being supported by written and practical work returned by students to their tutors for comment and any additional help they appear to need. Some courses combine channels of communication, as in language courses presented not only in printed study material requiring written exercises, but combining, with this material, conversation and oral exercises on tape. The tape recorder has made regular spoken communication between correspondence tutors and their students possible.

A changing concept of education has stimulated demand for correspondence education. There is a growing conviction that education is not only for a privileged group in society, or to be confined to childhood and adolescence, but that all people should have the opportunity of the extent and kind of education their full development requires, and that education should be a continuous process

from infancy to the end of life. This changing concept of education has led to a growing demand for continuing education, and so to a changing attitude to correspondence education. In its early days it was usually considered a poor alternative to face-to-face teaching, to be used only for those for whom attendance at in-school education was impossible. Despite this discouraging negative attitude, it became apparent, through experience, that correspondence education has some very useful features. In addition to reaching the otherwise unreachable, its flexibility provided opportunities to study independently of the lock-step of residential, institutional, group teaching, this being an advantage to both quick and slow learners. It also made continuing education possible without disruption to the responsibilities of home and employment; the adult could continue to learn as he earned. The attitude to correspondence teaching became positive, particularly in adult continuing education. No longer was it regarded merely as a substitute for, but rather as a supplement to, other methods.

Moreover, the education explosion has made it difficult for national education systems, especially in developing countries, to keep pace with demands for in-school institutions and trained teachers. Many have come to see in correspondence education a solution to some of their difficulties as it supplements and extends in-school education. This growing appreciation of correspondence education's usefulness appears in many established institutions which have incorporated some correspondence courses into their organizations in order to extend their programmes. Examples can be seen in the Extension Departments of many American universities which, as well as non-credit courses, are offering some credit courses by correspondence, so that it is possible to take part of a degree course by independent study. Australian universities, colleges of advanced education and institutes and departments of technical education are increasingly providing courses by correspondence leading to degrees, diplomas and certificates. In India, the University of New Delhi and the Punjabi University, at Patiala, have introduced correspondence study to qualify for degrees and the Punjabi University has added some post-graduate correspondence study. The University of Zambia has established a Department of Correspondence Studies. The Japanese Broadcasting Corporation (NHK-Nippon Hoso Kyokai) has developed senior secondary school courses combining the media of radio and television with correspondence courses. Tanzania's National Correspondence Institution has been established as an additional department of its Institute of Adult

Education supporting its correspondence courses with special radio programmes. In the U.S.A. and in Sweden, secondary school curricula are being given greater flexibility, breadth and enrichment by the integration into the residential programmes of available correspondence courses thus giving supplementary reinforcement to slow learners and additional subjects of study to quick learners able to absorb wider and deeper programmes of study. In addition to extending the curricula and services of established institutions, educational planners, particularly those in developing countries building national systems of education, are including services specifically designed to teach by correspondence.

So great has been the acceleration of interest in correspondence education that international and regional associations, concerned with improving their standards and effectiveness, are growing in number and activity. In 1938, at an international conference of correspondence educators held in Canada, the International Council for Correspondence Education (I.C.C.E.) was founded. This organization has become affiliated with Unesco as an international non-governmental organization. Examples of regional associations are the Independent Study Division of the National University Extension Association of the U.S.A., the European Home Study Council, the Japan Council on Correspondence Education, the African Association for Correspondence Education and the Australian South Pacific External Studies Association.

Can this change of attitude to correspondence education and this growing demand be a symptom of a changing system of education, which Alvin Toffler foresees as a "breakdown of the factory-model school" of the "industrial era", and the development of a system of lifelong education which "must prepare people to function in the temporary organizations" of the accelerating change of a "super-industrial era"? Toffler predicts:

> "Schools of the future, if they wish to facilitate adaptation later in life, will have to experiment with far more varied arrangements. Classes with several teachers and a single student; classes with several teachers and a group of students; students organized into temporary task forces and project teams; students shifting from group work to individual or individual work and back - all these and their permutations will need to be employed to give the student some advance taste of the experience he will face later on when he begins to move through the impermanent organizational geography of super-industrialism." [1]

1. Toffler, A. *Future Shock*. London, Pan Books, 1971. p. 369.

Certainly we are seeing to-day "students shifting from group to individual or independent work" and, with this shift, the increasing use of the correspondence method of teaching and learning, and the planning and setting up of increasing numbers of correspondence teaching institutions for a variety of reasons. We have moved out of the pioneering period of founding correspondence teaching institutions, initiated usually by private enterprise, and necessarily financed by students' fees, into the period of the planned institution established frequently by a public education authority to meet specific needs within the framework of a national system of education and financially subsidized by the government budget for education or by a foundation. In the case of developing countries, help in planning and establishing such an institution is sometimes given by international aid authorities in the form of grants for capital costs and technical personnel. Cumulative experience in planning, establishing and expanding these institutions is revealing certain basic steps which can be set down as guidelines for the future.

I. Factors leading to the establishment of a correspondence teaching institution

The basic motive for deciding to establish an institution to teach by correspondence is usually some educational need either felt by the general public or by employers. For example, many developing countries today have not yet sufficient secondary schools to accommodate all children completing primary education, and there are many adults who have not had an opportunity to pursue secondary studies in the past. From this section of the general public there is a demand for facilities to provide secondary education. Most developing countries suffer a shortage of trained manpower such as teachers, administrators, accountants and technicians. Employers press for training facilities to provide them with the efficient manpower essential to reach production targets. In addition to increasing demands for more and continuing education seen as the doorway to a greater opportunity for self development, and in order to meet the ever-growing need for more trained manpower to promote national economic development, there is the current change of attitude towards education. Greater flexibility is appearing in the organization of educational services, in the use of teaching media and in entrance requirements for further studies. In these educational needs, and in this changing attitude, lie the factors which are today leading to decisions, by governments and public education authorities, to establish institutions that are to teach by correspondence as part of the services of their national education systems.

II. The making of a policy decision

A policy decision to establish a correspondence teaching institution can be made with confidence only after a detailed feasibility study has been carried out. The personnel making this feasibility study need appropriate background experience; it is essential that between them they will have knowledge and understanding of the conditions and educational problems of the particular nation, and a practical knowledge of the operation of correspondence teaching. The experienced practitioner in correspondence education will see, in its application to particular objectives, both possibilities and limitations not always apparent to those who have not had practical experience of the kind of programme being considered; what can successfully be taught by correspondence depends on the level and nature of the planned programme. For example, the requirements and methods of presentation of higher education leading to university degrees will differ widely from those of junior secondary level. Both will differ from technical training and continuing education for adults having had little previous formal education. It is therefore, helpful to include in the team, making the feasibility study, a person who has had practical experience of correspondence teaching in the disciplines similar in level and type to the programme being planned.

Fundamental to a feasibility study is the explicit identification of the educational problem for which it is thought that correspondence teaching might be a solution. Is it a passing need which will require a temporary operation for a limited period until this need is met? Or is it a continuing need so that, once established, the institution will be a permanent organ of the national system of education? What is the extent of the demand? What will be the nature of the student body? What will be their status when they complete the studies it will offer? What are the estimated capital and running costs? Is the planned institution's programme to be limited to meeting the particular need for which it is to be established, or will its operation be later expanded to meet wider demands? If so at what rate can increasing running costs be met.

What are the possible methods of two-way communication with students? Are the postal services adequate? Are there other possible means of distribution of teaching material: bus routs, waterways, through village authorities or through other educational establishments? Is radio transmission and reception available, and to what percentage of the potential student body? Will instruction by a combination of printed material and radio or television reach all those who wish to study, or will it limit the numbers who can receive instruction because some do not have access to radio or television. Should the printed material alone give adequate coverage of the course of instruction with radio or television providing supporting programmes for those who can receive them?

The essential fact-finding of the feasibility study requires planning for the particular circumstances and a report of its findings is a basis for an informed recommendation to establish a correspondence teaching institution. If this institution is being planned as an organ of the national education system the recommendation is usually prepared and presented to the Government by a Ministry of National Education, a university or some other public education authority. The acceptance of the recommendation becomes the basis for further policy decisions essential in the preparation of a *Plan of Operation*.

III. Statement of aim and objectives

A statement of aims and objectives clearly defining the purpose of the institution is essential as a blueprint for the Plan of Operation.

Statements of objectives vary widely in scope according to the purpose of the institution. Two contrasting examples can be seen in Botswana and Tanzania. In Botswana the aim of the Teachers' Training College, established at Francistown in 1968, was to improve the quality of teaching in primary schools by giving in-service training to forty per cent of the primary school teachers in permanent positions who had not had any teacher training. This was a specific aim planned to be completed within five years and, therefore, it was for a terminal project. In Tanzania the scope of the aim was much wider. In 1970 Tanzania decided to establish a permanent National Correspondence Institution to help achieve mass adult education. The aim and objectives were:

(a) to help Tanzanians to understand the nation's policies and, thereby, be equipped to participate more fully in carrying out national policies and programmes;

(b) to equip Tanzanians to fill jobs which meet the manpower needs of the country; and

(c) to supplement efforts being made by leaders and adult educators in various departments of Government to bring about economic and social development in rural areas.

Such statements of aims and objectives are briefs for those given the responsibility of preparing a plan of operation to implement a government's decision to establish an institution in accordance with national philosophy and needs; they must be precise and explicit enumerating, without ambiguity, the overall aim of the institution and the specific objectives to be achieved so as to fulfil the aim.

IV. Plan of operation

Figure 1 illustrates diagrammatically the interdependent sections of a fully operative correspondence teaching institution. To ensure smooth and uninterrupted progress in establishing such an institution, or teaching service, a programme of action must be prepared and recorded in a plan of operation. The preparation of this programme will require making a number of decisions and fixing realistic targets and deadlines. Here again the expertise of the practitioner in correspondence education is needed. Sufficient time for adequate and careful preparation is essential; deadlines can be estimated only in relation to the availability of resources for the preparation and production of teaching material.

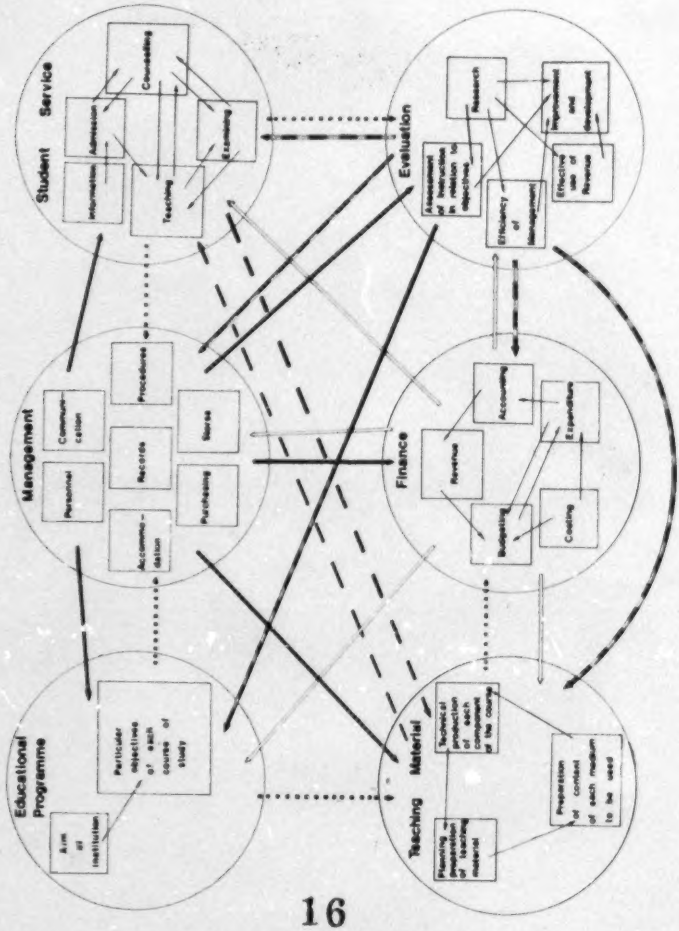
The plan of operation usually deals with the following:

location of the institution or service;
line of communication and responsibility;
staff recruiting and training;
educational target;
course recognition;
equipment and supplies;
administrative procedures and
finance and estimates on costs.

The plan of operation is the blueprint for those whose responsibility it is to establish the institution. The plans and time schedule it contains must be governed by reasonable expectations of what can be achieved with the available resources and the circumstances within which it must be implemented. It must be a document aiming at a practical reality, not a theoretical ideal. If its programme cannot be achieved, a discouraging impression of failure arises, whereas what has been achieved in the circumstances may have been encouragingly successful. It is better to found an institution on a limited programme within which initial experience can be gained, rather than on a too ambitious target which can lead to unreasonable pressure and sometimes to confusion. The staff appointed usually

have little or no experience of correspondence teaching or administering correspondence education and by the time the institution is established, and working efficiently, they will have acquired techniques and routines which will enable them to develop an expanded programme smoothly.

Figure 1. The interdependence of activities in an institution teaching by correspondence.



V. Location

The location of the institution or service and the line of communication and responsibility are interlocked, and it will depend upon the nature and scope of the institution. Sometimes it will be an independent, autonomous institution; sometimes it will be a department of a ministry of education, a university, or an institute of adult education; sometimes it will be a department of a college of education or a technical college. Sometimes it operates well as an independent institution, but in some circumstances it may operate better within an institution, for example, in a university, a college of education, or a technical college.

There is a tendency, when establishing correspondence education, to centralize it in one institution. We see this in the development of institutions known as correspondence course units, or national correspondence institutions. This centralization usually arises from the belief that all instruction involving the techniques of correspondence teaching and administering correspondence education must be handled by the one institution specializing in this method. Also, if the institution establishes a production unit to print its teaching material, it is usually considered more economical to install the equipment in one place. These reasons, however, are not valid in all cases, there may be other possible locations which, in some circumstances, may be more suitable.

It is customary for correspondence teaching departments for university studies to be established within universities as in many American, Australian, and Indian universities. To locate teacher education in colleges of education, and technical training in technical colleges would have many advantages.

Colleges of education are concerned with the education and training of teachers. They are staffed by educators trained and experienced in the principles and practices of teaching, thus fully qualified to prepare teaching material and to teach correspondence students. Although it would be necessary to increase the training college's staff for both resident and correspondence students, it would facilitate the co-ordination of pre-service, in-service

and refresher courses of training through resident and correspondence teaching. If the projected correspondence teaching service is for the purpose of teacher training and education then it may be best to locate it within a college of education where the expertise required is centralized and where the service can be developed as part of the entire college's programme. Technical colleges have the expertise for the development of technical training by correspondence, and they also have the specially equipped laboratories and workshops to accommodate correspondence students for short resident practical work sessions.

Increasing emphasis is being placed today on using a combination of teaching methods in order to achieve the best educational result so that it is desirable to bring correspondence teaching out of its traditional isolation. It is one of many teaching methods and experience has shown that it has much to contribute to the total system of education. Decentralization can give more educators the opportunity to gain expertise in correspondence teaching as an added skill.

Many specialized teaching institutions have facilities for production of duplicated or printed material, or, if additional equipment has to be installed, it does not necessarily mean that its decentralization increases the total amount required.

When considering geographical location of the correspondence education institution both the advantages and the disadvantages of possible alternatives must be investigated and weighed against each other. Constant and direct contact with experienced specialists and the use of established equipment and services can all greatly contribute to the correspondence teaching service's efficiency. When the same educators are responsible for both resident and correspondence students, so that they are taught the same syllabi by the same teachers, and examined by the same examinations, it becomes possible to maintain uniform standards of instruction and achievement, and to make valid comparison of performance. If, however, the correspondence teaching service is to be located in a resident institution, teaching loads must be realistic in allowing time for the efficient teaching of both resident and correspondence students.

If it is decided to locate all correspondence education in one institution, then its site should be close to the human resources essential for providing specialist consultants, part-time writers and teachers.

If the institution is to provide a varied programme involving many disciplines and different levels it is impossible for it to

have full-time staff fully qualified and competent in all aspects of its work. A nucleus of full-time staff will organize and supervise the work of the institution, but they will need part-time help in some specialist areas. Consequently, it is essential that the site of a large correspondence teaching institution with a varied programme should be close to other educational institutions such as a university, college of education, technical college, business college, schools and libraries. If it is to provide courses for manpower training, consultations with ministries and institutes of such specialities as management, finance and transport may be needed. An example of a national correspondence institution placed in a large educational and commercial centre is Tanzania's National Correspondence Institution in Dar es Salaam. The fact that the headquarters of a correspondence teaching institution are in a large city does not mean that it serves only, or even mainly, that area. Of the 10,000 students who had enrolled in Tanzania's National Correspondence Institution in the first two years of its operation only eight per cent lived in the city of Dar es Salaam, the remaining ninety-two per cent were dispersed throughout the nation as far as its coastal and lake islands. This is an example of a centralized institution in an urban site being truly a national institution.

VI. The line of communication and responsibility

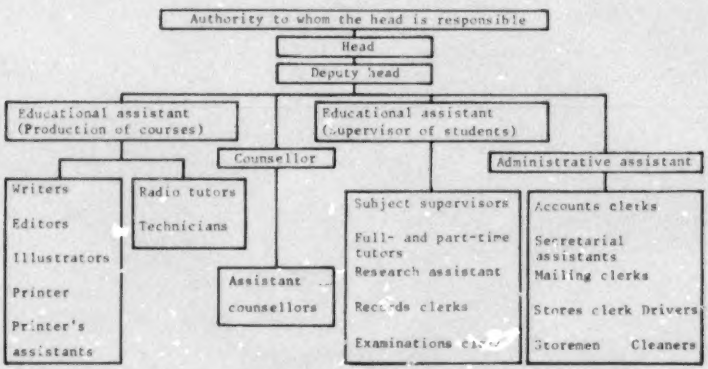
The line of communication and responsbility will be largely determined by the location of the institution. The head of the correspondence teaching establishment may be responsible in the case of an independent institution to a ministry, or, if established within another educational institution, he may be responsible to a university senate, board or council, a director of an institute or a college principal.

To the head will be entrusted the organization and running of the institution. It will be his duty to report to the authority to whom he is responsible on its service and progress.

Within the institution the line of communication and responsibility will be through section leaders of sub-sections, see Figure 2.

Sub-sections will report to section leaders, and the section leaders to the head, so that he will be conversant with the situation in each section of the institution, thus enabling him, when in consultation with section leaders, to make informed policy decisions.

Figure 2. Organization of staff.



VII. Staff establishment

The staff establishment is planned on the basis of the interdependent sections of the institution. There will be variations according to the location of the institution, or service, If Figure 1 is taken as an illustration of a typical, large, centralized and independent institution, then Figure 2 illustrates its staff establishment when the institution is fully developed and teaching some thousands of students. Correspondence institutions are usually established to provide mass education and their tendency is to grow rapidly beyond anticipated demand.

The positions of *head* and *deputy head* provide for continuous leadership in policy making and development. In the day-to-day running of the institution four experienced and responsible assistants co-ordinate the activities of different sections of the institution. As the term *assistant* has a different meaning in different organizations, the title "Educational Assistant" is defined, for the purpose of this discussion, as a highly qualified and experienced educator who can contribute ideas, initiate plans, make decisions and guide staff engaged in carrying out the educational programme. One *educational assistant* is responsible to the *head* for supervising the whole operation of the preparation of teaching material, the other for supervising the whole process of teaching the students. Together they are responsible to the *head* for developing and maintaining an educational programme which fulfils the objectives of the institution. An experienced *counsellor* supervises a student counselling section and work closely with the teaching sections. An experienced *administrative assistant* is responsible to the *head* for the management and administration of the ancillary services. Each of these four equally responsible senior officers leads a group of staff. The actual number in each group will finally depend on the size of the educational programme, and the number of active students.

The appointment of staff, to implement the plan of operation, must be planned so that the necessary staff become available as each step is taken in building the institution.

Any institution teaching by correspondence will have three basic tasks:

1. The preparation of the teaching material.
2. The distribution of teaching material.
3. The correction of students' written and practical work.

Fig. 3 is a diagram of the activities of a correspondence teaching institution. The student service of enrolment and correction cannot come into operation until there is at least one correspondence course ready for the enrolment of students. The ideal time for enrolment is when the whole course is written and printed or duplicated, so that there will be no delay in the students' progress once they can be enrolled. Certainly no students can be enrolled until the whole course is written and illustrated, at least half of it duplicated and no interruption to further production likely. Usually there is great pressure for enrolment once it is known that a correspondence teaching institution is being established. It is, therefore, unwise to have premature publicity which will lead to the frustration of students who must wait for enrolment. Again, ideally, there should be no publicity until at least one course is ready for release otherwise the necessity to answer many enquiries made in person, by telephone and by letter only delays the preparation work.

At least one whole year should be allowed for the writing and production of the first subject, or subjects. Therefore, the first staff to be appointed should be only those people required for this preparation. Fig. 4 suggests a plan for progressively appointing staff as the steps of building the institution are taken. Fig. 2 illustrates the staff establishment when all the activities shown in Fig. 1 are in full operation. Although many of the staff appointed may be experienced teachers and administrators they and the ancillary staff may not have had previous experience of the particular techniques of teaching by correspondence and administering correspondence education. Consequently the preparation period will involve staff training. If the staff appointed for this period of preparation and training include expatriates appointed because of their previous experience in teaching by correspondence, their local counterparts should be appointed and come on duty at the same time for the following two reasons:

(a) the expatriate staff need the guidance of their local counterparts to ensure that what they plan is acceptable to the people to be served by the institution;

Figure 3. Activities of a correspondence teaching institution.

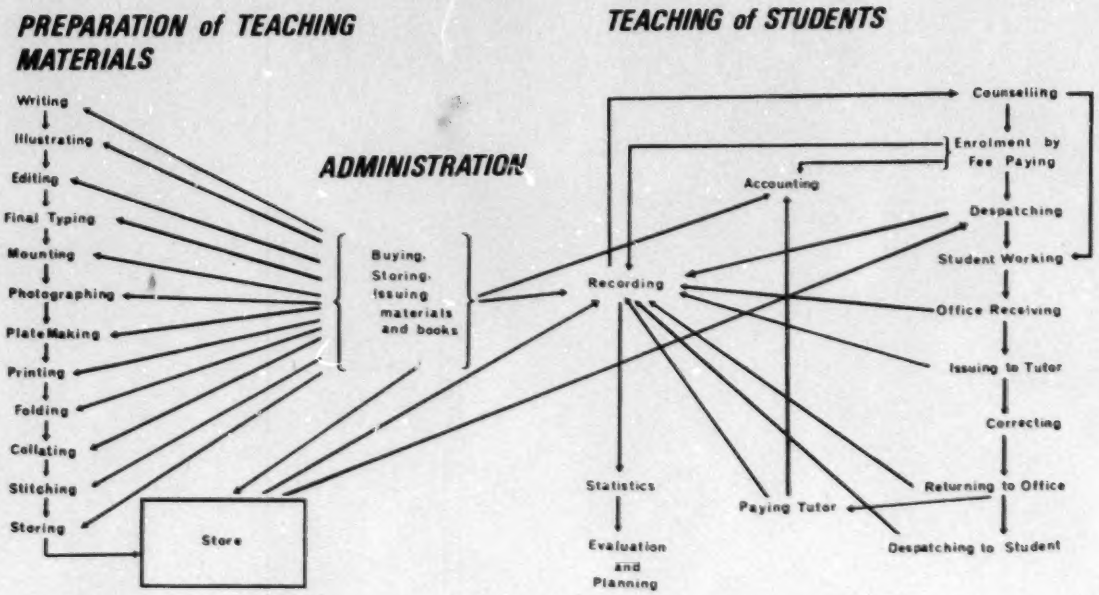


Figure 4. Plan for the progressive appointment of staff.

First year	Second year	Third year	
Head Deputy head Educational assistant (Courses) Educational assistant (Studies) Administrative assistant		Research assistant	
Secretary Radio tutor Editor Illustrator Printer Printer's assistant Stores clerk Full- and part-time writers Messenger Driver Cleaner	Counsellor Subject supervisors Full- and part-time tutors Accounts clerk Enrolment clerk Records clerk Mailing clerk Storeman	All these appointments made in the first and second years are to be multiplied in later years to keep pace with the volume of work as the numbers of courses and students increase.	

(b) the counterpart staff should be involved in the decision-making for the institution for which they will soon have to assume full responsibility. Only their participation in the process of building the institution will make it possible for them fully to understand its operation.

Planning for the appointment of additional staff will depend on the response in enrolment figures to the release of initial subjects, and the estimated schedule for the release of further courses. Below the head, deputy head, and their educational and administrative assistants, probably all staff will need increasing by 100% by the beginning of the third year. This staff should be budgeted for, appointed, and on duty before the volume of work grows so great that bottlenecks in the work in various sections delay the service to students. In-service training is continuous as newly appointed staff come in on duty.

In building an institution which is to teach by correspondence it must be realised that students cannot be enrolled and then not taught regularly. This situation would be analogous to students coming at an appointed time for face-to-face teaching and not supplying them with a teacher.

By the end of the second year an institution teaching by correspondence should be fully staffed for the needs of its third year, fully equipped, and fully operative. If the first two years are well planned, and the plans are fully carried out, the institution should be running smoothly and be ready for further development in its third year. It will probably grow in size and importance to a point which its planners could not have envisaged, that is what usually occurs.

The staff appointed to implement the plan of operation in the first year are all needed on duty immediately and at the same time, because they are all required to initiate basic activities which should begin simultaneously if the institution is to be established without delays arising from being unable to proceed from one step to the next. Concurrently with the preparation of the teaching material the use of accommodation must be planned, equipment chosen, purchased and installed, materials secured and procedures designed. During the preparation period all the activities, shown under the heading *Preparation* in Fig. 3, and the *Administration* associated with them are in operation. In addition the administration must be planning the procedures for implementing the second stage of the institution, that is, the activities shown under the heading *Teaching of Students* in Fig. 3.

VIII. The preparation of the teaching material for the initial target

The teaching material to be prepared includes all the material, printed or recorded, for whatever channels of communication are to be used in teaching the students - illustrated correspondence courses, radio broadcasts, television, tape-recordings, films and slides. The choice of media must be related to the circumstances in which both the institution and its students must work. The cost of production must be within the financial resources of the institution. The cost of the study material must be within the student's reach. Pen and paper is still the least costly equipment for the student, and it may well be all he can afford. The use of radio and television depends on facilities for transmission and access to receivers. The use of tapes makes oral communication between correspondence students and their tutors possible, but, while it is not difficult for the institution to prepare cassettes, it may be impossible for the student to have access to a cassette player. When deciding upon the media to be used, it must be realised that the combination of media requiring the student to have technical equipment may limit the number of people who can receive instruction from the institution. For this reason the traditional printed correspondence course with illustrations is often still the sole medium of instruction, although supporting radio programmes are becoming more frequent.

The writing of the correspondence courses should begin as soon as the staff, appointed for the first year of preparation, come on duty. Writers, either full or part-time, are appointed, syllabi determined and writers given continuous in-service training in the techniques of correspondence teaching. The responsibility for this training will rest upon the *head* of the institution, or an *educational assistant*, who will need to have had some correspondence teaching experience. If the two *educational assistants* (see Fig. 2) have had experience in teaching by correspondence the task will be easier, but, if not, as educators, they will not find it difficult to apply their knowledge and experience of methods of teaching and learning to the situation of correspondence teaching.

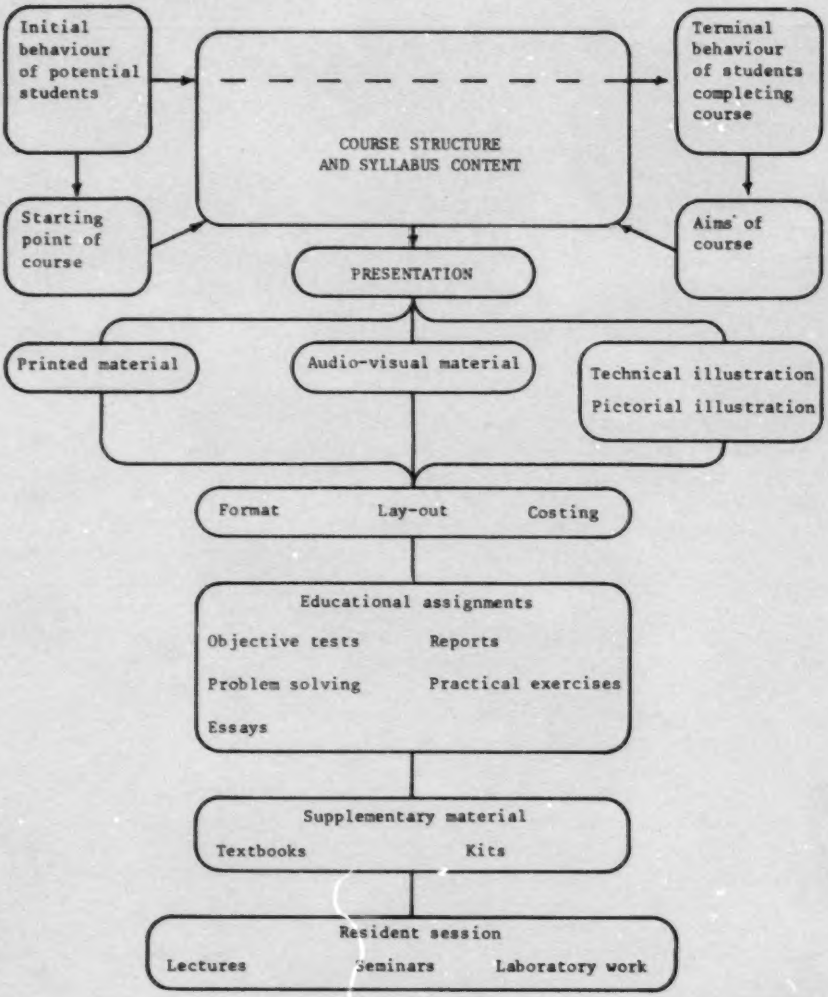
If the appointed writers are trained teachers, who are teaching the subjects they are writing, their task will be based on knowledge of the subject matter and their teaching experience, and, again, the techniques of teaching by correspondence will come more readily than if the writers have had no teaching experience. In some specialized technical fields, however, writers with the required technical knowledge but without teaching experience have to be appointed. In such cases all the educational staff must work much more closely with the writers.

At preliminary briefing sessions the *head, educational assistants, radio tutor* (if a supporting radio programme is to be prepared), and the *editor* should be present. All are aware of the content of the syllabus and can contribute to the discussion of planning the approach and presentation. (See Fig. 5 for all the matters to be considered when planning a course to be taught by correspondence.)

It is helpful to prepare a brief and simple *Guide for Writers* to give to writers. The most effective guidance will come, however, after a writer has made his first attempt at writing and so becomes aware of the challenges and problems. His first lesson should be read immediately it is delivered. If there is delay he will feel unsure of himself, and delay writing further, or may go on writing lesson after lesson perpetuating unsatisfactory forms of presentation which will require later revision of all his work at great cost of time both to him and the institution. Immediate reading and consultation will enable the institution to show the writer any unsatisfactory features. He can immediately revise this one piece of work and submit it again. As soon as he knows his presentation is acceptable he will continue with confidence, and the course when finally completed may need little editing. Time spent in guidance at the beginning together with continuous consultation with the educational staff of the institution, will save much time for both writer and editor.

The main difficulty in teaching by correspondence is that many writers feel they have only to write uninterrupted pages of factual information. The main task for the institution in guiding writers is to show them, by demonstration and example, that the same principles of teaching and learning apply in correspondence teaching as in face-to-face teaching. Students must be active participants in other ways than in passive, uninterrupted reading, from which their attention will soon wander. Skilfully introduced questions about what they are reading, or small exercises asking them to extract and write down a list of key points, or facts, or reasons to send to

Figure 5. Planning the presentation of study material.



their tutors, will keep them alert and help them to assimilate salient points. They can be asked to enter information from the text on to outline maps or diagrams. Visual aids should be introduced as part of the teaching text. What a teacher would usually draw on a blackboard can be included in a correspondence course. Visual aids will enliven the course, particularly if humour is introduced when it is possible to do so and when it is certain to be understood.

Short self-check objective tests can be given at the end of natural sections in a lesson enabling the student, as he works through the lesson to test himself on what he has read. The one word answers are given at the end of the lesson. These self-check objective exercises give the student immediate reinforcement, as in programmed learning.

There should be an assignment for the student to be sent to his tutor as an integral part of the lesson. The questions in this assignment should not be such that they can be answered by one word which could be corrected by the student himself from an answer key but they should call for an application of the knowledge and skills the lesson and self-check tests have helped him to assimilate. They should be sufficiently diagnostic to reveal to the tutor, who reads his answers, whether or not the student has understood and assimilated the material studied. They must provide the basis for any additional individual teaching the correcting tutor can see the student needs, and will give him through written comments.

The writer should be guided in the matter of layout, which is important in teaching. In the classroom a glance at a teacher's blackboard will show if he understands the importance of layout. Clear, neatly set out work including attractive sketches and with material displayed and spaced for emphasis or for pauses will help students grasp and remember the content. In a correspondence course also, careful layout is an effective teaching aid, but this task should not be left entirely to the editor. The writer should be encouraged to see each lesson he writes as a teaching instrument, and to set it out neatly and clearly in what he considers the most effective layout. There should be a discussion about format and layout with the editor and illustrator before the writer begins to work and agreement about general principles should be reached at this point. If the writer is trained in these principles, the editor will receive manuscripts which are much easier and quicker to edit.

Finally, writers should be encouraged to introduce and present their own ideas. Just as the personality of a teacher can be a powerful influence in the classroom, so a lively, imaginative, friendly personality will come through in a correspondence course. If the writer is made to feel he is doing a piece of original and creative work he will be far more interested and less likely to produce stereotyped lessons monotonous to both himself and his students. From his freshness of approach the educational staff of the institution will absorb many new ideas which they will pass on to others.

Preparing correspondence courses is challenging, exacting, and time-consuming work. Experience has shown that it takes about a year to write and produce the equivalent of one year's instruction to students. During this time all members of the team - writer, editor, illustrator - should work continuously and in consultation with each other. Good correspondence courses are prepared more easily if the work progresses steadily and without interruption. It is important to plan a time schedule for writing, illustration and production, and to estimate realistic deadlines, but until the writing is finalized the course should not be advertised. The writer may meet with an accident and time will be lost either in waiting for recovery or in seeking a replacement. There may be a breakdown of the printing equipment, or power restrictions. All these interruptions have been experienced. It is embarrassing for the institution, and disappointing for students, if a date has been suggested for the release of a course and it is not ready by that date. It is better to make no announcement until the course is ready for student enrolment.

If the printed correspondence course is to be supported by some other medium, for example, radio or cassette tapes, the course cannot be considered ready until all the teaching material is completed. Therefore, radio or tape scripts must be prepared, recorded and ready for broadcast or despatch before the course can be released. If the study of the course requires the reading of prescribed books, the course cannot be released until the books are available in sufficient supply, either through booksellers, to whom the students have access without difficulty, or through the correspondence teaching institution. These books may need to be ordered many months ahead to ensure their availability. The co-ordination of all these details is the responsibility of the *educational assistant* supervising the preparation of the study material. At the beginning of the preparation it is wise to make a checklist of all the actions to be taken, timing them to ensure that all the material is ready by the projected release date of the course.

IX. Planning accommodation and lay-out of the institution

The location of the institution will affect its accommodation facilities. If it is to be located as a department of an established institution it may be allocated accommodation within a building of that institution. Alternatively an extension to the existing building may be built for it. If, however, the correspondence teaching institution is to be autonomous and housed separately, it will either be allocated space in a vacant building, or it may have been decided to erect a new building for it. Whether it is to be housed in an existing or newly erected building, it is wise to consult a person who has had the practical experience of working in an institution teaching by correspondence about both the amount and layout of the accommodation required.

In estimating the amount of accommodation needed the size of the educational programme must be taken into consideration and calculations made of the physical volume of material it will produce, the number of personnel who must have space to work, and the amount and size of the equipment to be installed.

Merely to state that the institution will develop five *areas of study* does not give a true indication of the size of the target. These *areas of study* may expand into numerous subjects when the courses to cover them are structured. Each *area of study* should be carefully examined on the basis of some common denominator to appreciate its full implications in volume. If a correspondence course in management and administration, and a subject, equivalent in content to one year of resident study of about 100 lecture hours, are taken as examples, then this course, to meet the local needs fully, could require the writing of several basic compulsory subjects and several elective subjects. See Fig. 6 as an example of a structured course of study arising from a planned *area of study*.

The explosion of this *area of study* into many "subjects" helps to give a more realistic appreciation of the amount of storage space required. And storage space cannot finally be estimated without calculating the number of students for whom a course is to be printed and the rate of usage.

Figure 6. Structured course of study

"Area of study" - Management and administration

Proposed correspondence course structure

STAGE 1 (approximately one year's study)

Compulsory subjects

1. Basic accounts - 100 hours
2. Basic economics - 100 hours
3. Man in organization - 50 hours

STAGE 2 (approximately one year's study)

Compulsory subjects

1. Principles of management - 100 hours
2. Introductory legal aspects of management and administration - 50 hours
3. Either, one full subject[1] or, two half subjects[1] from the following:

Full subjects	Hours
Financial management	100
Marketing management	100
Personnel management	100
Public administration	100
Transport management	100
Wholesale and retail management	100

Half subjects	
Banking and insurance	50
Co-operative management	50
Exporting and import	50
Industrial management	50
Office management	50
Production management	50

1. To indicate the content and weight of a subject the estimated approximate number of lectures hours has been shown. Full subjects are those of 100 hours; half subjects are those of 50 hours. The course has been structured in two stages each of two-and-a-half subjects, giving a total of five subjects.

Demand is usually estimated on the population of the country, the number of indigenous institutions teaching the particular study by correspondence, requests from employers, an industrial survey which may have followed, and the number of inquiries from the public. For example compare the situation in the different countries listed below:

	Population (millions)	Number of institutions	Number of inquiries
Australia	13	10	2,000
Botswana	1	1	30
Tanzania	14	1	1,000
Zambia	4.5	2	130

It is clear that the one Tanzanian institution will need to produce more copies of the correspondence course to meet the total Tanzanian demand than any of the institutions in the other countries. For economy in production, and to ensure adequate time for revision and re-printing, it is usual to print at least two years' supply.

An example of the calculation to be made for each course is the following, made for a four years' professional course in Accountancy:

	Structure of course
Stage 1	Commercial Correspondence Introductory Accounting Commercial Law I
Stage 2	Financial Accounting Introductory Auditing Commercial Law II
Stage 3	Company Law and Accounts Monetary Theory Taxation Law and Practice Introduction to Data Processing
Stage 4	Advanced Financial Accounting Auditing and Investigations Management Accounting
	Total: 13 subjects

It is customary to print each subject in a number of units, or booklets, each containing about two weeks' study material for the student. The average number of booklets in a full subject of one year's duration is about twenty. The calculation will then be:

Intake of students each year	1,000
Copies of course for two years' supply	2,000
Subjects in the course	13
Booklets in each subject	20
Booklets to be printed (2000 x 13 x 20)	520,000

A calculation like this, for each correspondence course in the initial target, will be essential to estimate the amount of accommodation required to store the total volume of material which will be produced. It must always be remembered that, although the initial volume will be reduced when despatch to students begins, reprinting for replacement must begin before supplies are exhausted to keep the course operating continuously. Moreover, these calculations have taken into consideration only the volume of printed material which is calculated for study material printed outside the institution. If the institution has its own printing unit it must accommodate also the incoming paper to be printed, and space for these supplies must be calculated on quantity and frequency of delivery.

All these calculations are essential when estimating the total amount of accommodation needed. Once the initial target has been implemented, further courses will be developed so that possibilities of expansion must be considered. One of the difficulties which usually besets the setting up of a correspondence teaching institution is the inadequate and unsuitable accommodation.

Sometimes a *plan of operation* expresses accommodation requirements merely in estimated square metres. But how is this estimate to be provided? If it materialises as a number of small rooms spread over several floors in a multi-storey building, it is very difficult to organize an institution in which large volumes of work must flow continuously from one section to the next. An institution teaching by correspondence has a work-flow pattern which is different from other educational institutions, see Fig. 7. The lay-out of the institution should be planned as closely as possible on the pattern of the work-flow, whether the accommodation provided is in an existing building, or in a building to be designed and erected for the institution. Large open areas are more convenient than numbers of small rooms.

A correspondence teaching institution can be comfortably accommodated in an expansive factory-type building. The ground plan of a suggested lay-out is sketched in Fig. 8 in which areas grouped round a quadrangle allow the work flow to circle round the building with extra lines of communication across the quadrangle. However, this kind of lay-out in a single-storey, factory-type building requires a large area of land, so that it usually has to be built in

Figure 7. Work flow.

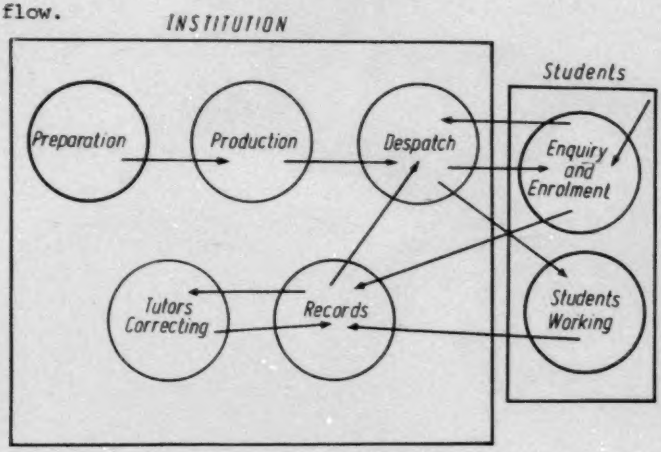
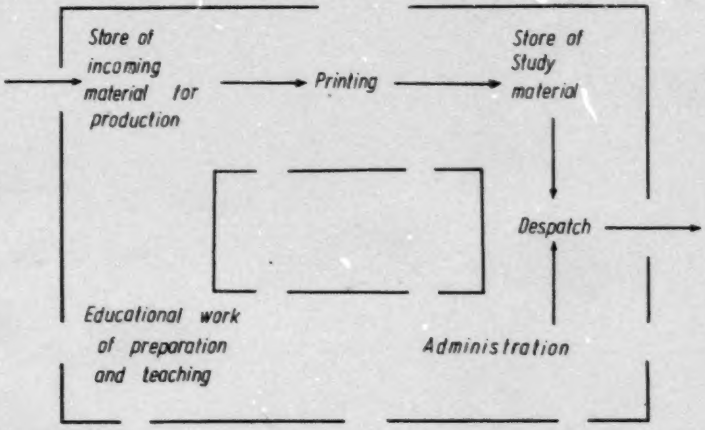


Figure 8. Suggested layout of a single-storey building.



a rural area where land is less expensive. This has been found inconvenient because of the difficulty of maintaining contact with other educational institutions which are the sources of advisory and part-time help, and the difficulty of securing office workers and supplies of material. The expenses involved in continuously overcoming these difficulties may offset the initial savings on the land.

It may be much more convenient to establish the institution in a large, closely populated urban centre, with easy access to various educational institutions, consultants, libraries, bookshops, suppliers of material, and a large post office. It is, however, too expensive in land, and often prohibited, to build an extensive factory-type building in an area reserved for high-rise buildings. If the site chosen dictates a multi-storey building the principle of planning it according to work flow can be implemented.

On the ground floor are all the heavy materials and machinery with provision for unloading incoming material at one end of the building and despatching lesson material at the other end. The store for incoming paper and other supplies for production feeds into the production unit, which feeds the store of printed material. From the other end of this store there is outward despatch of lesson material. Thus all heavy bulky material follows the work flow.

On the middle floor all the administrative work and the student services can be accommodated.

On the top floor, which will be the farthest from interruption, and have good lighting, the educational work of writing, illustrating and editing can be accommodated. This lay-out would allow for easy conference between all educators - those preparing the courses of instruction and those correcting the students' work. If radio supports the correspondence courses the radio tutors and technicians, and the recording studio could also be on the top floor. Some institutions teaching by correspondence plan for seminars and practical work. Such institutions may need lecture and seminar rooms, a library, laboratories and workshops. Unless they can use these facilities in other educational institutions, they will need more floors in a multi-storey building supplied with an adequate number of elevators. However, the suggested principles of lay-out can be followed - all heavy work handling bulky material and all noisy machinery on the ground floor, and all work needing maximum light and minimum interruption on the top floor.

X. The installation of equipment

The installation of equipment is urgent because as soon as writing begins the means of duplication should be available. The term "duplication" is used here not in the sense of copies of material produced by the machine usually called a "duplicator", but in the sense of producing multiple copies produced by any type of machine.

There are different methods of arranging for production:

(a) contracts can be made with a government, university, or commercial printer, provided he has staff and equipment, to ensure regular delivery in accordance with required delivery dates. Sometimes, on the assurance of a regular volume of work, a printer can negotiate an agreement satisfactory to the institution for cost and delivery, and can give satisfactory service. This removes the whole burden of production from the institution and may not prove any more costly than production by the institution; and

(b) the institution may set up its own production unit.

If the institution is to have its own production unit, the equipment chosen will depend upon the scope of the educational programme and, therefore, the amount to be printed, the amount of finance available, and the kind of personnel available to handle the equipment. Printing is not work for amateurs. In printing establishments machine-minders have to be trained, and unless the people to be trained are available, complicated means of duplication should not be installed. A simple method of duplication is an electric duplicator fed by a typewriter (electric if possible), and an electronic stencil-cutting machine. This equipment can be used economically if the pages with typed text only are cut on wax stencils and pages with illustrations are typed, and illustrated, on paper, then cut on plastic stencils on the electronic stencil-cutting machine. Provided only black and white work is needed the process is very simple. Colour work can be produced with the use of coloured inks in the duplicator. Duplicators which will duplicate two

stencils simultaneously can now be bought. However, the maximum speed possible on a duplicator cannot produce the same volume of work as that produced by an offset press with a plate-maker to feed it. An offset press can produce at least 5,000 impressions an hour, and several pages can be run on one side of a sheet, according to the size of the press.

It must be remembered that if one is dependent on only one duplicator or press, then any breakdown, any failure of supply of spare parts, and the time required for servicing, will interrupt production. One should never try to be wholly dependent on only one machine.

Before any machine is bought, its capacity to produce should be related to the volume to be produced. This requires calculations based on the number of courses to be produced, and the average number of pages in each booklet. The calculation, already given, of the number of booklets to be printed for a course in Accountancy for 2,000 students showed that a total of 520,000 booklets were needed. If each one of these booklets contained an average of ten pages, the estimate of the total number of pages would be 5,200,000. In a working day of seven hours the press will run an average of five hours, as the average time of two hours a day is estimated for setting up, cleaning and servicing. For the production of 5,200,000 pages, the calculated duplicating or printing time according to the size of the duplicator or press is approximately:

Impressions per hour	Pages per impression	Printing time		
		Hours	Days	Months
5,000	1	1,040	208	8
5,000	2	520	104	4
5,000	4	260	52	2
5,000	8	130	26	1

Two examples of the relation of the capacity of printing equipment to volume to be printed are the in-service teacher training course conducted between 1968 and 1973 at the Teachers' Training College in Francistown, Botswana, and the adult education programme of the National Correspondence Institution of Botswana.

In the Botswana project, a total of 609 teachers were enrolled over a period of three years. Each student-teacher received in-service training by correspondence following short resident sessions in the College. The total number of pages to be printed for each student over a period of three years was approximately 2,000. This amounted to a project total of 1,218,000 pages. An offset press and platemaker, single foolscap size, proved adequate for this project.

The first printing equipment installed in Tanzania's National Correspondence Institution was an offset press and platemaker, double foolscap size. Printing began on this press as soon as the first booklet was ready for production, and, thereafter, printing has been continuous. However, when the "areas of study" prescribed by the plan of operation were analysed, courses structured, and the demand estimated, calculations of printing time showed that it would take nine years to print the initial target. Consequently by the second year, when the volume of the study material to be printed exceeded the capacity of the first press installed, another press, double the size of the first, was installed. As the educational programme grows it is anticipated that a third press identical to the second will be needed. It must always be remembered that the printing of study material for correspondence teaching does not end with the initial printing of a course. Every course will need regular re-printing according to rate of distribution and as each new course is introduced the volume for future reprinting increases.

The kind of equipment needed for making the printing plates, depends on the process to be used. If photography is involved, a darkroom with a process camera is necessary. Possible methods of platemaking should be investigated and the simplest, quickest and most economical method capable of producing the essential result should be chosen.

The type of equipment needed for handling the paper will depend on whether or not it is delivered to the institution cut to size for printing. If it is cut it is easily handled. However, paper pre-cut to a uniform size will restrict production to a uniform format This may not be a disadvantage depending on the kind of study material to be printed. If the courses are very varied it may be educationally important to be able to produce each course in the format most suitable to the nature of its material. If, for this purpose the institution buys paper in bales, a guillotine will be essential. It must be large and powerful enough to cut the volume of paper needed to keep the duplicating equipment running continuously. All the paper will pass twice through the guillotine - first when the paper is cut to the size for printing, and second when the printed booklets are trimmed. Where an educational programme exists, work on the guillotine being continuous and heavy, an electric guillotine should be installed.

Bales of paper are very heavy to move and lift, and careless handling will cause waste of paper. It is possible to buy a flat, low trolley on wheels and a small battery operated fork-lift for

moving bales of paper. It would be an advantage to obtain these two pieces of equipment as they will simplify the work of moving and lifting heavy material which will be a daily feature of the work.

All the printed study material has to be collated and stitched; if it is printed on sheets containing two or more pages these will have to be folded, which can be done by hand. However, whether or not it is practicable to fold and collate by hand or machine will depend on the size of the educational programme. In a small institution, teaching only a few hundred students, able to employ and accommodate sufficient workers to keep pace with the production of the press, folding and collating by hand will be satisfactory. But if some thousands of students require study material, a folding machine will be necessary.

The folding machine should be chosen in relation to its capacity and the kind of material to be folded. If the press is printing four or more pages on each impression, a folding machine with a long and cross fold is helpful, but should be simple enough for the operators who must handle it. It is useful if the folding machine has a perforating device on it, as it may be desirable to perforate pages to be easily detached by students.

Various collating machines are available. If a folding machine with a long and cross fold is installed, a collator, which will collate the folded leaflets into each other, will be required.

A stitching machine which will do both side and saddle stitching is essential. It should be chosen for its capacity to stitch the required volume in the required time, which should be estimated by calculation.

When choosing any piece of equipment for the production unit, it is important to ensure that spare parts, servicing, maintenance and consumable supplies will always be readily available. Also it should be simple enough for the operators who must use it. To overburden the production unit with sophisticated, complicated equipment can lead to waste of money and time if it stands idle through inability to use it.

In the section where study material is prepared for printing, the skilled typists will need typewriters with the typefaces, keyboards and the length of carriages required for special work. For example, if courses in mathematics and engineering subjects are to be typed, a typewriter with a keyboard having the necessary symbols will be required. Experience has shown that a dual keyboard, operating on a long carriage, enabling the typist to type the symbols as they occur in the text, is the most satisfactory. Such typewriters

can be custom built, and, if some of the correspondence study material is highly specialized, the expenditure will be justified.

For uniform work it is wise to install identical typewriters, so that, while any typewriter is being serviced, the work can be continued, without interruption, on another. Before deciding upon the typewriters to be installed, it is most important to ensure that servicing, spare parts and consumable supplies are available for that particular typewriter.

Illustrators will need drawing boards and instruments.

Equipped typists and illustrators should be ready as soon as the editorial section has study material ready for production.

As well as production equipment, office equipment must be installed. The basic requirements are typewriters, a duplicator, a franking machine, a stapling machine, and scales large enough to weigh heavy parcels. If sufficient finance is available it is desirable to have also a photocopier (dry process), an electronic stencil-cutting machine, an addressograph, a letter opener and a calculating machine. These machines will prove to be an economy, because they are time and labour saving. Cabinets for files and card record systems will be required in accordance with the administrative procedures designed.

A vehicle will be essential to collect and deliver the incoming and outgoing mail which may amount to many bags daily from the post office.

The installation of equipment should begin as soon as the staff, appointed for the preparatory period to implement the *plan of operation*, are on duty. It is important, therefore, for the *printer* and the *administrative assistant* to be among the first appointments as was shown in Fig. 4. The *printer's* technical knowledge and experience is essential in making decisions about the equipment to be bought for the printing unit, in planning the layout of the unit, and in superivising the installation of the equipment and adequate supplies of power and water. This preparatory work will take some months and should begin immediately. The writing, editing and illustrating of the first study material will be developing concurrently so that the printing unit should be ready for production as soon as material for printing begins to flow through to it. There should not be any delay between processes; smooth progress depends on careful planning. The *administrative assistant* will be needed to handle all the business arrangements for equipment and supplies purchase, not only for the printing unit but for the storage, the records and despatch sections as well, to be organized in

readiness for the second stage of setting up the institution. This second stage will require all the activities shown in Fig. 3 under the heading *teaching of students*.

The storage area will require shelving sufficient to hold the printed study material. If obtainable, painted steel shelving which is rustproof is more satisfactory than wooden shelving; it can accommodate a greater volume in less space; it is lighter to move if re-arrangement is necessary; it is not subject to destruction by termites. The height of the shelving and the depth and width of pigeon holes should be calculated to accommodate the format of the study material so that no space is wasted. The store room will also need cabinets to hold the card system of records of stock supplies and location.

XI. Designing administrative procedures and record systems

The designing of administrative procedures and record systems must be carried out during the preparatory period in readiness for the enrolment of students, and for maintaining a continuous service to them. This preparation requires consultation between educational and administrative staff and the in-service training of all in the use of the procedures and records upon which the smooth and efficient organization of a correspondence teaching institution depends. Not only enrolment procedures and student progress records are involved. An efficiently organized store with flagged re-ordering levels, based on estimated rate of usage, and efficient procedures for ordering and taking delivery of supplies, are essential to ensure that there is no break in production and consequent interruption of service to students. Once a student has enrolled he must not be delayed in his studies by any interruption in sending him study material.

So many procedures are interdependent that it is important to make a list of all the matters which can be foreseen as needing decisions and to arrange them in order of priority. For example, the method of distributing study material and corrected work books to students may have considerable effect on running costs. As the method planned may involve the format and cover design of study material, it must be considered and decisions made before any study material is printed. If the postal service is to be used, early consultations should be held with the postal authorities. The institution will have a large and continuously increasing load of outgoing and incoming mail flowing through the postal system. It must be fully informed about postal charges and schedules, and the most satisfactory procedures of delivery to and collection from the post office. It must ensure that any method designed for postal handling conforms with postal regulations, as good relations and co-operation with postal authorities will help both organizations.

In some countries reduced postal charges are available for student papers. This possibility should be explored. In Australia such papers are carried as second-class mail if they are posted in

envelopes endorsed "Student Papers Only" and left open, secured only be a staple. In Holland, one correspondence teaching institution was able to arrange for reduced postal charges by pre-sorting outward mail into mail bags for special areas, so that mail left the institution ready for direct delivery to the railway station.

In some countries, Botswana for example, the official government mail is carried without charge. As the Teachers' Training College of Francistown is an institution of the Ministry of Education it was issued with an Official Free stamp. Enclosed in each unit of study material was an answer booklet in which the student wrote his assignment of written work. It had the return address printed on it and was stamped with the Official Free stamp.

Tanzania's National Correspondence Institution estimated that by the tenth year of its operation it would be teaching at any one time about thirty thousand active students. It was required by its plan of operation to supply its students with stationery and consequently a work book cover was designed. This design was planned to save time spent on addressing envelopes, to reduce the cost of envelopes, and to keep postal charges to a minimum. The framed space for the student to fill in his name and address both identifies the booklet as his, and at the same time addresses it for returning it to him. This saves the time spent on addressing thousands of envelopes in the institution. In the second year of its operation the institution is returning over nine thousand corrected booklets a month, and the load will continue to increase as more and more courses become available. This design for the students to self-address their work books ensures that the work books are correctly addressed, and with no extra work to the student, lifts an enormous time-consuming burden from the institution.

When a student enrols he is sent a packet containing his first study material. Enclosed in each of the first five units of study material is a work book for the answers to the student's assignments. Each work book contains an envelope addressed to the institution for him to use for posting the completed work book. He is asked to return each work book for correction as soon as he has completed it. When each corrected work book is posted back to him a new unit of study material is enclosed. In a twenty-unit course the new material is sent as follows.

corrected work unit		new work unit
1	-	6
2	-	7
3	-	8

corrected work unit		new work unit
4	-	9
5	-	10
6	-	11
7	-	12
8	-	13
9	-	14
10	-	15
11	-	16
12	-	17
13	-	18
14	-	19
15	-	20

Thus by the time the student has received corrected work book 15 he has received all his study material.

When prepared for posting, the corrected work books are folded in half with the address on the outside, they are franked above the address, the new unit is placed inside, and the booklet stapled at both ends on the open side. By this method envelopes are used only one way - from the student to the institution, halving the cost of envelopes; in a large institution this can mean a considerable saving. Tanzania's expenditure on envelopes in the first year of its operation was 39,000 Tanzanian shillings. If the work book cover had not been designed to travel one way without an envelope, the expenditure would have been 78,000 shillings. Moreover, posting the new units inside corrected work books instead of separately, saves an average of one shilling fifty cents per student per course postal costs. This does not appear a great saving until it is calculated that, in posting one course to each of 10,000 students, 15,000 shillings have been saved.

Correspondence education is proving less expensive than resident instruction. A case study of the in-service training programme provided by the UNRWA/Unesco Institute of Education in Beirut, was carried out jointly by the International Institute for Educational Planning and Unesco, and the report was published in *New educational media in action - case studies for planners*, Vol. 2, Paris, Unesco: IIEP, 1967. The average cost per student per year in the in-service programme was found to be $341, which was less than half the cost of $820 per student per year in the pre-service training colleges. A comparison of the cost of 366 Tanzanian shillings to teach face-to-face, and 144 Tanzanian shillings to teach by

correspondence the same subject content again shows a cost of less than half for correspondence education. Encouraging as these figures are, it is nevertheless important to keep the running costs of a correspondence teaching institution as low as possible while maintaining a high standard of teaching and service. The designing of a postal procedure and cover to save work-time and cost is but one example of the importance of the early planning of administrative procedures.

Every institution teaching by correspondence will develop its own procedures and design its own record systems to meet its own particular needs as they become apparent, so that the examples which follow are only illustrations of some systems which have been found useful.

The section dealing with the preparation of study material will need to maintain an up-to-date record of the preparation of each subject. A card system is useful for quick reference provided all entries are made on it regularly so that the information is up-to-date. The cards should be designed for a box of drawers, the identification being at the top of the card. They should be printed on both sides so as to accommodate one subject easily thus constituting a complete and permanent record.

Some institutions set up a wall board on which the planned schedule of preparation, for at least one year ahead, is displayed. A superimposed movable indicator, advanced daily, will show at any time if the preparation is falling behind the planned schedule. These record systems of progress can be established for all types of material to be prepared - printed study material, radio programmes and cassette tapes. Any member of the staff should be able to find out immediately, by reference to these records, how far preparation has gone, and where there are any delays which are likely to set back the whole schedule.

One cause of delay can be failure to order early and regularly enough sufficient supplies of the consumable materials required for production, such as paper, printing chemicals and inks, films and tapes. One of the earliest steps to take is to calculate, on the basis of the size of the educational programme, the quantities of each item which will be needed. Orders should be placed immediately for all items which are not perishable. Items likely to deteriorate should be ordered as early as possible within a safe time limit. Ordering time will depend on the reliability of delivery time. If the institution is being established in an area where consumable items are in short and irregular supply they should be

ordered as early as possible, in sufficient quantity, to hold a reserve stock of at least one year's supply to meet the need caused by an delay in the delivery of later orders. Running out of one item can bring the whole printing programme to a standstill.

Stock records can also be kept on cards. In this system one card is used for each item and shows the location of the item in the store, the minimum quantity to be held, and the maximum quantity to be ordered. The figure of the maximum quantity will be calculated on the rate of usage and delivery time. When the institution has been in operation for some time the average rate of usage will be established, and the estimate of the quantity and frequency of ordering can be realistically calculated on actual figures. The entry of the supplier's name, address, and phone number on the card is not only time-saving when orders are prepared, but ensures that, when staff changes occur, newly appointed personnel will have all the information they need in one place on one permanent record when re-stocking.

As soon as printed or any other study material is ready for storage, a similar stock card should be prepared to show location in the store, the minimum quantity to be held in stock below which supplies must not be allowed to fall without re-printing, because there can always occur a sudden unexpected increase of enrolment or an unexpected delay in printing.

The cards should be designed for use in the type of cabinet containing pull-out trays so that entries can be made without removing and replacing cards. If cards are designed for holding in box cabinets the name of the item should be at the top of the cards. Therefore, to ensure that information is conveniently placed on cards the kind of card cabinets to be installed should be decided before the cards are designed.

When the stock of study material is put on the shelving in the store, a coloured marker placed to indicate physically the level at which re-printing should be initiated would be helpful. The estimate of the re-printing level, both on the card and shelf, should allow ample time for re-printing before stock is exhausted, so the institution cannot fall into the embarrassing position of having enrolled students interrupted in their studies because the study material is out of stock.

In a correspondence teaching institution, the administrative assistant and storeman are key personnel in ensuring an uninterrupted flow of preparation and teaching.

The storeman must be efficient in signalling re-ordering and re-printing needs; the administrative assistant must ensure orders are placed promptly and regularly, and he should follow these up to secure delivery by the required dates. The procedures and record systems for ordering, storing and stock-taking, should be designed and implemented at the beginning of the preparation period so that all personnel concerned learn by experience while the load is still small, and so that accurate records are kept from the beginning of the operation. These records supply the basic information for costing and future budgeting, so that their accuracy is extremely important.

The initial budget estimates for the institution will require an amount for capital expenditure and an amount for running costs. The amount for capital expenditure can be estimated, with reasonable accuracy, from the retail prices of the items to be bought. However, as there is a tendency for prices to rise steadily, an allowance of about 33% should be added to cover rise in costs during the time interval between the listing of the items of capital expenditure and the time of purchase. If a building is to be erected the same percentage should be allowed for a rise in building costs. Running costs are more difficult to estimate, because, before enrolment begins, it is difficult to estimate student demand accurately. It is usually greater than expected, because, once a correspondence course is released, it is often found to be useful to a wider public than the particular sector for which it has been prepared, thus it is wise to budget generously for running costs. Salaries of full-time staff, fees for part-time staff, building maintenance, equipment and furniture, consumable supplies, transport and postal expenses, are the main items to be covered. There should be an allowance for miscellaneous items which may occur and are not covered under the main categories. In the preparatory period there will be no fees to be paid to part-time tutors employed to read and comment on the students' assignments. There will, however, be double the expenditure on consumable supplies if the wise practice is implemented of initially ordering two years' supply so that there will, thereafter, always be a year's stock in store to meet an emergency which might arise before the regular annual orders are delivered. When a correspondence teaching institution is fully established, budgeting will become straightforward as estimates of annual needs can be based on actual figures of quantities consumed, rates of usage and increase of demand.

Accounting procedures must be established, not only for the payment of equipment and consumable supplies, but for fees to writers and tutors and the acceptance of fees from students, if tuition fees are to be charged. If the institution plans to employ some part-time tutors, who will mark students' written assignments at a fee per work book or paper, a procedure will need to be designed in readiness for the beginning of the teaching period. If the procedure involves printed documents, it has to be designed early enough for the documents to be available when teaching begins. A simple method, used in several institutions, is based on a docket book issued to part-time tutors. On the inside cover of this docket book are printed the following instructions to tutors:

1. On the yellow docket write a list of the corrected work books or answer sheets being returned in a packet, and place the docket in the packet on top of the corrected work.

2. The carbon duplicate on white paper remains in the docket book as your record of work corrected.

3. If there are more than 10 units returned in a packet you will need to use more than one docket.

4. If you spoil a docket write CANCELLED across it, and return it with the next docket used. All dockets are numbered, and must be available for the auditor's check.

5. Immediately after the end of each month complete in duplicate a claim form for payment for the number of units corrected from the first to the last day of the month.

When each docket book is received with a packet of corrected units a records clerk checks that the packet contains the units listed and refers the docket to the accounts clerk. When, at the prescribed intervals, the tutor makes his claim for payment, the accounts clerk checks it against the filed dockets and, if it is correct, approves it for payment. When a docket book is being designed it is very helpful to have the original and duplicate pages printed on strongly contrasting colours. If the institution uses a large number of part-time tutors the periodical payment of tutors can be a time-consuming task and will require efficient procedures and well-trained staff.

Looking again at Figure 1, one can see that those sections concerned with the preparation of the educational programme, finance and management, have all come into operation in the preparatory

period shown as the first year in Figure 4. The enrolment of students, when all the essential preparation has been completed, brings the institution into full operation and involves the Student Service and Evaluation sections shown in Figure 1, and all the activities under the heading *Teaching of students* in Figure 3. In preparation for this second stage of development, simple procedures for enrolment and for maintaining student records must be planned. The planned correspondence teaching institutions, being established today, are aware of the importance of research and evaluation to ensure their work is fulfilling its objectives. Records should be designed in such a way that they can be used as a pool of information for future research.

The student's application for enrolment form is an important basic document, if it is designed to find out information the institution will need. To plan future developments the institution will want to know as much as possible about its students: their average age, their occupations, their educational background and their reasons for undertaking the studies for which they are applying. Each institution will design its own application form for its own purpose. It must be remembered that some applicants may not have much experience of completing written forms and it will help them if the form asks for the answers to its questions to be shown by crosses in prepared blocks. Moreover, forms designed in this way are quick to process.

Large institutions find it useful to give each student, when he enrols, a registration number. This overcomes the difficulty of identification when two or more students have the same name, or when students use different forms of their name on different occasions. A convenient system is to use seven figure numbers of which the first two numbers are the year of enrolment, for example, 7500000 would be the number given to the first new student to enrol in 1975. If the annual enrolment reaches 10,000 there are still sufficient figures within the same system, for example the last enrolment in 1975 might be 7514682. The first two numbers will always show at a glance the year of a student's initial enrolment, if the same number is given to him for all subsequent enrolments for additional courses. This is easily controlled by putting his number on each new enrolment form issued to him, which will lead also to quick retrieval of his previous records. A pre-numbered register, in which each student's name is written against the next vacant number when he enrols, will become a valuable record, particularly if date-stamped at the beginning of each day. All volumes should be

Figure 9. Student progress record card.

Unit	Sent	Rec.	Ret.	% Mark	Unit	Sent	Rec.	Ret.	% Mark	Unit	Sent	Rec.	Ret.	% Mark
1					11					21				
2					12					22				
3					13					23				
4					14					24				
5					15					25				
6					16									
7					17									
8					18									
9					19									
10					20					Cert. No.				

NPC—15497/5 000/74

Tutor _____

Subject _____ Stage _____ Enrolled _____

Address _____

NAME, Miss, Mrs., Mr. Number

preserved and will show the record of enrolment year-by-year from the date of the opening of the institution.

It is also very useful to keep a record in a journal showing the weekly total enrolments and the total annual enrolment. The figures for each year can be recorded on a double page and in time this journal becomes an invaluable document showing up trends and annual patterns. It provides most useful and indisputable evidence for the additional staff needed and can be maintained without any additional work based on figures which the accounts section maintains. It is a very quick action for an accounts clerk to make one entry each week, enter a total and cumulative total at the end of each month and the grand total at the end of each year. Similar, quickly maintained cumulative records can be kept in other sections - for example in the despatch section for out-going mail.

A card system will be needed to maintain a record of student progress. To save time in making entries as much information as possible should be pre-printed on the cards. In each of the three years of the course, a pre-printed card of a different colour could be used to record the despatch dates to a student of new study material, the receipt from him of a completed work book, and its return to him corrected. Thus, at a glance, such a card shows in each year, at any time, his exact work position, the rate of his progress and whether a particular piece of work was with him or his tutor. Filed in front of this card is another card of another colour which shows the mark he has gained in each piece of work in each year of study. Progressive recording on this card shows the standard of his work, and when the course and record is completed, puts before the principal on one card all the evidence he may need for his official report. These two cards should be designed to be filed together in a box holder with the student's name and college number placed at the top of the card for quick reference.

Figure 9 illustrates a card designed for an institution teaching many separate subjects to many thousands of students. For each subject each student has one card containing the combined record of material despatched to and received from him, with his marks indicating the standard of his work. The average number of units of study material per subject is twenty but the card provides twenty-five spaces for those subjects which may have more than twenty. It also provides space for any notations which may be necessary, and for recording the number of the Certificate of Completion sent when the student has completed all units of work at a satisfactory standard. This card has been designed for filing in card cabinets. When

planning a large institution with thousands of students, for whom thousands of entries will be made daily, this type of card cabinet in which entries can be made without removing and replacing cards is most desirable. When designing cards for this cabinet the student's name and number is put at the bottom of the card so that it can be read through the clear plastic holder which keeps the card in place, and projects beyond the card above it so that it can be quickly located.

In most, but not all, institutions, the enrolment papers and all correspondence to and from a student are filed in a personal file, with his name and number on the cover. There are various ways of storing these personal files. In a large institution there will be some thousands of active students who will necessitate frequent references to their files, so that a system must be planned by which a file can be quickly located. Sometimes they are kept in filing cabinets, sometimes in pigeon holes, and sometimes in pockets which hang on rails. Whatever type of equipment is used, a difficulty arises both in the file storage and in the card system for active students if they are arranged in numerical order of enrolment. As early enrolments complete their courses and their files and cards are withdrawn, the fixtures will progressively become empty at one end, while later enrolments exhaust the space in the fixtures at the other end. This periodically requires the time-consuming task of moving all the files and cards back. A very simple way of overcoming this difficulty is to file by the last two numbers; for example, in a pigeon hole or cabinet labelled 87, place the files beginning with the '87' numbers in the first year of enrolment, for example, 7500087 for the year 1975. Continue placing all the '87' numbers in order ending with the latest in the current year.

For this system a fixture is required with one hundred places large enough to hold the files of the active students. Each place must be numbered. The numbers run from 00 to 99. The convenience of this system is that files of students who complete or discontinue courses are withdrawn at an even rate throughout the fixture, thus leaving space in each numbered space for the files for new enrolments. Thus the work of moving all the files periodically is eliminated.

This method of arrangement by the last two numbers can be applied throughout the records of the student service section. At the end of each number are some spaces for newly enrolled students. As students who have enrolled earlier complete their courses and their cards are withdrawn, the later cards can be moved up leaving

spaces ready for new cards. It is very useful to colour code cards using a different colour for different categories of students. For example, when correspondence courses are used for army education, military authorities often require reports on the number of army personnel enrolled and their progress. Such a report can be prepared quite quickly if the cards are signalled by a special colour so that each tray can be drawn out and scanned quickly for the cards required.

The same method can be applied in filing the cards of students who have completed courses. As only occasional reference is made to these cards they are usually filed in boxes or cabinets with drawers.

As students complete their courses and their files are withdrawn from the trays of active students, they are filed in their correct positions in the number group to which they belong. It is a great advantage to install a uniform method of filing student files and record cards because it reduces staff training to the operation of one method.

It is necessary to establish an alphabetical index of students' names as they do not always put their numbers on letters and work books. Occasionally, too, a student may accidentally use a wrong number. In all such cases the alphabetical index will indicate the number, and so give ready reference to all other records filed by number. The alphabetical index can be conveniently accommodated in a card system on small cards on which only the student's name and number are recorded as it is no more than a key.

The first step in training the staff required for the maintenance of the institution's records is its design by applying the following general principles.

1. Keep the system as simple as possible.
2. Do not overburden the institution with unnecessary records.
3. Avoid the duplication of records; every time information is copied errors are likely to arise unless a photocopier is used; copying takes time; try to make one record card serve all purposes as in the case of the stock cards.
4. Use colour coding whenever possible, but before you introduce it ensure that you will be able to secure continuous supplies of the coloured card or paper you want. Also ensure that the colour coding is applied consistently.

As plans to organize the routine work flow are outlined, a job description can be prepared for each member of the staff. The procedures and job descriptions will reveal the nature of the activities' interdependence through which the work flow of an institution

teaching by correspondence passes (see Figures 1 and 3). No member of staff works in isolation. He receives work processed by a colleague through an earlier operation, and another colleague's work depends upon his carrying out the responsibilities set out in his job description. It is extremely important that each member of the staff realizes his individual responsibility in the whole operation of the institution, and that he appreciates the importance of co-operation, and of immediately informing his section leader of any difficulty which arises which would prevent the process for which he is responsible from flowing through without interruption.

In addition to job descriptions, a written daily routine for each section, issued to all personnel working in that section, will help to establish awareness of individual responsibility to the whole section. Simple, clear organization and flow charts, displayed on the walls of the sections to which they relate, help in the in-service training of the staff.

Only when sufficient study material, in all media to be used, is ready for students to work without interruption, and the staff have been briefed in their responsibilities; only then is the institution to begin the work for which it has been established. This is the time for an official "opening" of the institution, if one is to be held, for the aspirations of some can immediately be satisfied. Premature publicity should be avoided. Unfortunately, announcements, through mass media, are often made much earlier, resulting in a flood of inquiries arising from highly motivated potential students, expecting to be able to begin their studies immediately. The general public does not know that it takes at least one year, and possibly longer, to prepare study material. This lapse of time leads to disappointment and loss of confidence in the institution, which, to the outsider, appears to be doing nothing, while actually it is making steady progress. A continuous stream of inquiries and follow-up letters of complaint throughout the preparation period seriously delays the work and adds to postal expenditure, due to the necessity of replying at least by circular letters. Inquiries have to be filed as waiting lists for notification when enrolments can be accepted. This additional load of unproductive, time-consuming work can be avoided by withholding publicity until the institution is ready to teach some students.

An information brochure for potential students should be printed setting out the studies available, what fees are payable, how to enrol and what recognition will be gained by completing the studies offered. It is important that all decisions should have been

made, and accurately announced, so that there can be no misunderstanding. The dissemination of sufficient and reliable information is vital in gaining the confidence of the student body and the general public in the service of the newly established institution.

XII. The enrolment and teaching of students

The enrolment and teaching of students brings the institution teaching by correspondence into full operation, as illustrated in Figure 3. Before entering this stage of its development - the first testing phase of the planning and organization - all the staff for counselling, enrolling, recording and teaching should be appointed and briefed (see Figure 4). Their full training will come only with experience. In-service training is a continuous activity in a correspondence teaching institution, because, not only must the initial staff be trained, but, as the institution grows, additional and replacement staff must also be trained.

The correspondence teachers, both those preparing the content and presentation of the study material and those reading and commenting on student assignments, are usually trained teachers with an understanding of the principles and practices of teaching and with teaching experience in other media. Their in-service training in the correspondence teaching institution amounts to acquiring the teaching techniques by a different method. All those who prepare study material must tutor some of the students using the material they have prepared. From student reaction they will readily see where and how the study material needs revision in readiness for scheduled re-printing. It may even be necessary to take immediate remedial action by preparing supplementary material for distribution to all enrolled students until the revised course is printed.

Some correspondence teaching institutions have an adequate number of full-time staff to meet the full teaching load of preparation and tutoring, but others find it necessary to seek the assistance of part-time tutors in particular subjects. If this is the case, before enrolment begins a panel of tutors, with knowledge of the subject to be released, must be appointed and briefed. Again, it is valuable to have a prepared booklet stating their responsibilities and duties. A *Guide for tutors*, like the *Guide for writers*,

must be prepared by each institution for its own particular conditions and objectives. It is important that part-time tutors are briefed in detail about the aims of the institution, the nature and aspirations of the student body, and the procedures operating in the institution, so that they are fully aware of their own function and of how their work fits into the total pattern of the organization.

Once the teaching begins full-time subject supervisors should review the correction of tutors, and they should discuss with them any features of their work which are not satisfactory, until such time as they are giving their students all the help they need. Thereafter, the work of all tutors should be spot-checked by subject supervisors to ensure that high standards are maintained. Tutors should also be asked to bring to the attention of their subject supervisors any feature of the study material which is proving to be unsatisfactory so that it can be revised. It is the tutors who read the students' written assignments, who are in closest touch with the student body, and through whom will come a growing knowledge of its nature and needs.

XIII. Research and evaluation

In a correspondence teaching institution, evaluation is an essential continuous process, if the institution is to remain sensitive to the changing educational needs of the community and of the student body.

The Evaluation Section in Figure 1 shows that, through research, the instruction must be assessed in relation to the objectives of the institution. Is the performance of the students showing that these objectives are being fulfilled, and fulfilled without difficulty? Research should investigate the efficiency of management. Are the administrative procedures working smoothly? Have they produced any difficulties? What modifications are necessary to overcome any difficulties and improve efficiency? Is the use of revenue producing the best possible educational service? What improvement and development do the research findings suggest?

An institution teaching by correspondence is particularly well-placed to carry out the research essential for evaluation. Almost all the teaching material, both written and oral, must be recorded for communication to students by one or more media. Most of the reactions from the students are recorded in writing or on tape. The operation of the student service requires the recording of student progress and achievement. Indeed, in the normal daily work routine, there is progressive accumulation of the raw material for research. With today's growing recognition of the need for evaluation, finance is being more readily allocated for research personnel and equipment. Consequently, today's planned institutions being established to teach by correspondence will want to provide from the beginning for a continuous programme of research and evaluation.

Although the institution will have been planned to give educational services to particular categories of people, the nature of the potential student body cannot be defined as clearly as the nature of the actual student body, which only comes into existence with enrolment. The institution will want to find out who its students are, what their ages and occupations are. Where do they live? What is their educational background? If an enrolment form

has been used, much of this information is recorded on it. Simple and not too expensive fact-finding machines are available today. All the information from the enrolment form is punched on to specially designed cards which are kept in boxes labelled for regions. The machine can be programmed to give the information required by placing cards in it and is mechanically vibrated to select the cards. This fact-finding machine has proved quick and simple to operate. When the first 7,000 students were enrolled in Tanzania's National Correspondence Institution, it was possible to find out their regional age and sex distributions, their occupations, and their educational background. The facts that 92% were fairly evenly distributed in rural areas, and that 16% gave their occupation as farming, indicated that the institution was achieving its aim of reaching the rural population who had fewer educational facilities than the urban population. It was found that the majority of the student body were adult men between the ages of 20 and 34, occupied in teaching or farming, and having an educational background of Standard 7 or a Teacher's Certificate. The very small percentage of women indicated the need to find out why women were not seeking further study, and how to encourage them to do so.

To test the effectiveness of the courses it is necessary to find out how many students complete courses and how long the average completion time is. Drop-out numbers must be found. A high percentage of drop-out at a particular point in the course is a matter requiring immediate investigation. Why are students dropping out at that point? Is there some difficulty in the course? How can it be overcome? The same punched cards can be used to find out completion numbers and drop-out rates.

Ideally correspondence teaching institutions will test their prepared study material on average groups of students before releasing their courses to the public. The reactions of these test groups will provide the information needed for evaluation; final production and release of the study material will come only after this evaluation and the desirable modifications have been carried out. In actual practice there is usually so much pressure on the institution to begin teaching students that there is no time for test groups to work the course; the early enrolments become the test groups. This means that immediate evaluation of study material should begin as soon as a course is released. The release of study material does not mean the end of a task, but the beginning of another one: the research and evaluation in order to test the effectiveness of the study material, and to prepare for its revision.

All study material should be reviewed and, if necessary, revised and re-printed at least every third year. Sometimes, changing syllabi, new regulations or developments in technology may require more frequent revision.

Every course of study material prepared and released must, thereafter, be regularly maintained at a satisfactory standard, and it is only by a continuous process of self-evaluation that a correspondence teaching institution will maintain its standards.

XIV. Planning for future development

Planning for the appointment of additional staff will depend on the response in enrolment figures to the release of initial subjects, and on the estimated schedule for the release of further courses. Below the *head, deputy head,* their *educational* and *administrative assistants,* probably all staff will need increasing by a hundred per cent by the beginning of the third year. This staff should be budgeted for, appointed, and on duty before the volume of work grows so great as to cause bottlenecks in the various sections, thus delaying the service to students.

By the end of the second year, a correspondence teaching institution should be fully staffed for the needs of its third year, fully equipped, and fully operative. If the first two years are well planned, and the plans are fully carried out, the institution should be running smoothly and be ready for further development in its third year. Experience has shown that such an institution is continuously developing as new study material is being prepared, and experience directing its modifications. New procedures are being developed as the institution expands. Through constant evaluation of the educational and administrative services' effectiveness, in relation to the institution's aims, guidelines for development will be provided. This alone can keep the institution alive and responsive to changing needs.

In *New media in education in the Commonwealth* are published case studies of institutions of correspondence education in Kenya, New Zealand and Zambia. Among the conclusions drawn from these case studies is the statement:

> "The experience of the three institutions shows that it is essential to pay particular attention to the mechanics of organization and administration. It is dangerously easy to

plan expansion and make projections without making the necessary provision for producing and processing the materials".[1]

It is to make this necessary provision that forward planning must be based on realistic budgeting for personnel, accommodation, equipment and materials, if development is to keep pace with growing demand.

Among the staff appointed to establish the institution there may be some who have had previous experience of teaching by correspondence. If so, this experience will give them some indication of what developments lie ahead and it will enable them to plan for future expansion. Lack of previous experience, however, need not be a deterrent. Teaching by correspondence, and administering correspondence education, are essentially activities which are "learned by doing". Indeed, the pioneers in correspondence education had no other way of learning. The reactions of correspondence students, requests from other educational authorities, the expressed needs of the nation and the cumulative experience gained in operating the institution will continuously give the direction to future development.

An encouraging approach, to be both commended and recommended, was shown by Ghana at the Seminar on Correspondence Education in Africa held at Abidjan in 1971, where Mr. J.K. Ansere said:

> "The need for organizing correspondence courses in Ghana was recognized as far back as in 1960... The original idea was to solicit assistance from overseas bodies... but the attempt fell through. In the circumstances, we decided to try it on our own, using our existing machinery and staff for the job. I must say the effort has been worthwhile".[2]

1. C.E.D.O. Research Team. *New media in education in the Commonwealth.* London, Commonwealth Secretariat and Centre for Educational Development Overseas, 1974. p. 253.

2. Ansere, J.K. *Correspondence education in Ghana.* Institute of Adult Education, University of Ghana, 1971.

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Questionnaire (17)

To develop the series further, it would be helpful if readers could record their impressions and inform the IBE. (Please write 'yes' or 'no' in the space following each question. Further comments may be written on the back of this sheet.)

1. Do you find the author's analysis useful for your own work? ☐ in particular, is it:
   - an adequate survey of the field? ☐
   - a basis for further discussion and study? ☐
   - too abstract to be useful? ☐

2. With regard to the sources cited, could you indicate any recent documents of a similar type which have been overlooked?

3. Can you indicate any cases of innovation in your own country (or field of specialization) which you feel might have interest for other countries if adequately written up? Please name the person or institution able to provide further information about the project.

Please indicate your name and address and return this questionnaire to: the International Bureau of Education, Palais Wilson, 1211 Geneva 14, Switzerland or, when applicable, to your Unesco Regional Office for Education (i.e. Bangkok, Dakar or Santiago).

INTERNATIONAL EDUCATIONAL REPORTING SERVICE

The principal aim of this service is to provide information about innovations which have a high relevance to developing countries. It will be designed to serve educational leaders in such countries, particularly those who decide policies and plan and administer education systems, so that they may be aware of the various possibilities open to them. Thus the IERS is seen as one instrument for helping in the renovation of national systems of education. It follows that the reports issued by the service will deal with subject areas of priority concern to developing countries. The emphasis lies on case materials about new ways of organizing the teaching and learning process which appear to lead to improved and wider educational opportunities without undue cost.

Although the IERS is placed in the IBE, it is taking shape as a network programme rather than a centralized operation. The Unesco Regional Offices for Education and the field programmes of Unesco as well as of Unicef, ILO and FAO are associated as partners in the service. Still more important, national institutions for educational information and research will be involved, to carry out studies and to supply and use the information, so that the network for exchange of innovatory experiences will be a reality.

The reporting service will become visible initially through a variety of documents such as indexes, abstracts, case studies, topic-centred papers and a newsletter; subsequently it is hoped to add non-print materials also. From the outset the IBE and Unesco Regional Offices wish to encourage requests for information, for it is by its response to the needs of users that the IERS will finally prove its value.

The IERS programme has been made possible through voluntary financial contributions to a special Unesco account by a number of international and bilateral agencies and national institutions. The seven donors at present are Unicef, the aid agencies of Canada, Sweden, the United Kingdom, the United States of America, the International Development Research Centre (Ottawa) and the Ford Foundation, who have offered support for a first period of three years.

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